CLAIMS

I claim

1. A method for creating and using non-scalar-valued financial instruments, said method comprising:

selecting a non-scalar value structure;

defining a financial instrument, the financial instrument having a plurality of characteristics, the step of defining comprising:

selecting a type for the financial instrument;
selecting a set of terms and conditions for the financial instrument, the terms and conditions containing one or more references to non-scalar values of said non-scalar value structure.

2. The method of claim 1, where the non-scalar value structure is the class of surreal numbers.
3. The method of claim 1, where the non-scalar value structure is the field of complex numbers.
4. The method of claim 1, where the non-scalar value structure is a vector space of dimension n.
5. The method of claim 1, where the type of said financial instrument is an equity security.
6. The method of claim 1, where the type of said financial instrument is a debt security
7. The method of claim 1, where the type of said financial instrument is a hybrid security.
8. The method of claim 1, where the type of said financial instrument is a derivative security.
9. The method of claim 1, where the type of said financial instrument is a private placement.
10. The method of claim 1, where the type of said financial instrument is an instrument subject to securities law.
11. The method of claim 1, where the type of said financial instrument is a commodities contract.
12. The method of claim 1, where the type of said financial instrument is a futures contract.

13. The method of claim 1, where the type of said financial instrument is an insurance contract.
14. The method of claim 1, where the type of said financial instrument is a private contract.
15. The method of claim 1, where the type of said financial instrument is a currency.
16. The method of claim 15, where said currency is a currency of a sovereign nation.
17. The method of claim 1, where the conditions include provisions for one or more non-scalar-valued transactions among a plurality of parties.
18. The method of claim 1, where the NFI is represented in an online system.
19. The method of claim 18, where said system is a trading system.
20. The method of claim 18, where said system is an online gaming system.
21. The method of claim 20, where said online gaming system is a multiplayer gaming system.
22. The method of claim 1, where the financial instrument is used in an educational setting.
23. The method of claim 1, where the financial instrument is used in a recreational context.
24. The method of claim 1, where the financial instrument is used in a therapeutic context.
25. The method of claim 24, where said therapeutic context makes use of real and imaginary currencies associated with said non-scalar values.
26. The method of claim 25, where said therapeutic context is associated with a system that monitors the behavior of one or more players.
27. The method of claim 26, where said system dynamically adjusts the players access to said real and imaginary currencies in response to said behavior.
28. The method of claim 1, where the financial instrument is used as part of a financial trading system.
29. The method of claim 28, where said financial trading system is used for training of traders or other operational staff.
30. The method of claim 29, where said training takes place in a real time trading environment.
31. The method of claim 28, where said financial trading system is used for simulation of trading strategies.
32. The method of claim 31, where said simulation takes place in a real-time trading environment.
33. The method of claim 28, where said financial trading system is used for optimization of trading strategies.
34. The method of claim 33, where said optimization takes place in a real-time trading environment.

35. The method of claim 28, where said financial trading system is used for risk management.
36. The method of claim 35, where said risk management takes place in a real-time trading environment.
37. The method of claim 1, where one or more parts of the non-scalar value structure has an equivalent real scalar value.
38. The method of claim 1, where one or more parts of the non-scalar value structure has an equivalent imaginary scalar value.
39. The method of claim 1, where one or more parts of the non-scalar value structure are convertible into an equivalent real scalar value.
40. The method of claim 1, where one or more parts of the non-scalar value structure are convertible into an equivalent imaginary scalar value.
41. A system for creating non-scalar-valued financial instruments, said system comprising:

a means for selecting a non-scalar value structure;

a means for defining a financial instrument, the financial instrument having a plurality of characteristics, said definition comprising:

means for selecting a type for the financial instrument;

means for selecting a set of terms and conditions for the financial instrument, said terms and conditions including one or more references to the non-scalar value structure.

42. The method of claim 1, wherein said method is facilitated by one or more computers.
43. The method of claim 1, wherein said financial instrument is represented by one or more physical certificates.
44. The method of claim 43, wherein said certificates are made of paper.
45. The method of claim 43, wherein said certificates are made of plastic.
46. The method of claim 1, wherein said financial instrument is identified with one or more physical certificates.
47. The method of claim 45, wherein said certificates are made of paper.
48. The method of claim 45, wherein said certificates are made of plastic.
49. The method of claim 1, wherein said financial instrument is represented by one or more components of a computer system.
50. The method of claim 49, wherein said components are part of an electronic computer system.
51. The method of claim 49, wherein said components are part of a biological computer system.
52. The method of claim 49, wherein said components may be implanted in living tissue.
53. The method of claim 49, wherein said components are part of a quantum computer system.

54. The method of claim 53, wherein said components are protected by quantum cryptography.
55. The method of claim 1, wherein said financial instrument is identified with one or more components of a computer system.
56. The method of claim 55, wherein said components are part of an electronic computer system.
57. The method of claim 55, wherein said components are part of a biological computer system.
58. The method of claim 55, wherein said components may be implanted in living tissue.
59. The method of claim 55, wherein said components are part of a quantum computer system.
60. The method of claim 59, wherein said components are protected by quantum cryptography.